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EXAMINER

CHOUDHARY, ANITA

ART UNIT

PAPER NUMBER

2153

20

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/371,916

Applicant(s)

LIU ET AL.

Examiner

Anita Choudhary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17, 18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17, 18 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Arguments***

Applicant's arguments filed January 19, 2004 have been fully considered but they are not persuasive.

The Examiner agrees with the overall characterization of the references, yet disagrees with the conclusion reached about the combination of Huang and Dai. Applicant argues that automatically registering a new communication device with a cable modem is not well-known in the art and that the combination of Huang with Dai is improper because the claimed references teach away from their combination. Specifically that if Dai were modified by Huang to automatically update the source address table for each incoming packet controller when a new source address is encountered, then Dai will be unable to distinguish between addresses directed to an address within the controller's working port segment and packet that are not (see Paper 19 page 11).

However the combination of Huang in view of Dai does not teach away from the combination and Dai would still be able to drop unnecessary signal traffic within a controller's working port segment. That is, Huang shows a system wherein only terminals within a LAN (fig. 4 31a-31n, 32a-32n...) are used in mapping and adding to an address table (314) on each port controller (32), thereby forming the LAN having a switch fabric (34). Traffic is kept local to the LAN (col. 3 lines 56-67). Similarly, Dai shows a system wherein traffic is kept local to the working ports (34-34n) and associated nodes (22-22n). The plurality of working ports and nodes form a local network connected to an overall network (24) (see Dai col. 3 lines 43-49). And Dai shows a central source address table (86) used by all the working ports and nodes of the local

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network. Given this, the main difference between Huang and Dai, is that Huang maintains address table (314) for the LAN in a distributed manner (at each port controller), whereas Dai maintains a central address table (86) for its local network of working ports and nodes. Therefore, if Dai is modified by Huang to automatically update its source address table (86) with new addresses encountered from local terminal nodes (as shown by Huang, col. 4 lines 38-50), Dai would in fact still be able to drop unnecessary signal traffic from incoming packets that do not belong to the local network of working ports and nodes and thereby maintain local traffic and reduce network traffic.

Applicant also argues that there is no motivation to combine the reference shown by Beighe specifically with Dai and Huang. In response the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been well known in the art to use the references shown by Dai and Huang to be implemented in a cable network environment wherein terminals are linked to the Internet via cable TV service.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 and 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dai et al (US 5,615,340) in view of Huang (US 6,480,488) in further view of Beighe et al (US 5,809,252).

Dai shows a system for having an incoming packet controller for controlling incoming packet transmission. Dai shows:

- Receiving incoming data packet having a destination address, comparing the destination address of the incoming data packet to the list of addresses (col. 4 lines 16-29).
- Transmitting incoming data packet to communication device that are associated with destination addresses on the list of addresses (col. 4 lines 24-29).
- If destination address does not match address in the list of addresses, then filtering the incoming data packet to prevent transmission (col. 4 lines 29-34, col. 6 lines 7-36).

Although Dai shows substantial features of the claimed invention, Dai does not explicitly automatically registering a list of addresses associated with outgoing packets. Nonetheless this feature is well known in the art, and would have been an obvious modification to the system disclosed by Dai as evidenced by Huang.

In an analogous art Huang discloses a system for sorting and transmitting data packets on a LAN from various registered source addresses to destination addresses in a table (Abstract).

Huang shows:

- Receiving an outgoing data packet from a communications device (31n), the out going packet having an address that identifies the communication device (source address) (col. 4 line 1-16).

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- Comparing the address with a list of address (314) that identifies any communication devices that have previously been registered with the processing device (col. 3 lines 12-15, col. 4 lines 38-45).
- Determining that the address is not included in the list (314) (col. 3 lines 12-21, col. 4 lines 38-50).
- Adding the address to the list of address (314) (col. 3 lines 12-21, col. 4 lines 38, 50).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Dai to employ the features taught by Huang in order to increase network speed (see Huang col. 2 lines 44-59).

Although Dai in view of Huang show substantial features of the claimed invention, they do not explicitly show cable modem receiving incoming and outgoing packets. Nonetheless this feature is well known in the art, and would have been an obvious modification to the system disclosed by Dai and Huang as evidenced by Beighe.

In an analogous art, Beighe shows an interface for capturing and filtering incoming packets. Beighe shows cable modem (16) connected to cable network (21) for filtering packet traffic (col. 4 lines 30-47).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Dai in view of Huang in order to decrease cost of utilizing a cable network for Internet access (see Beighe col. 1 lines 48-60).

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Claims 2-14, 17, 18, and 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Dai in view of Huang and Beighe, in referring to claim 1 and 21, and in further view of Parameswaran Nair et al. (US Patent 5,724,356), hereinafter referred to as Nair.

In referring to claim 2, although the combined teachings of Dai in view of Huang and Beighe shows substantial features of the claimed invention, as discussed above, it does not explicitly disclose processing device comprising bridging component. Nonetheless, this feature is well known in the art and would have been an obvious modification to the system disclosed by Huang in view of Dai as disclosed by Nair.

In an analogous art, Nair shows bridge system filtering traffic to restrict unnecessary bridge traffic. Nair shows a processing device (LAN modem) associated with bridging component (fig. 17, col. 3 lines 51-64).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system disclosed by Dai in view of Huang by employing the conventional feature of bridges, as shown by Nair, in order to connect two LAN in a wide area network.

In referring to claim 3, Nair shows a buffer for receiving packet on the modem and the packet in buffer being processed by bridge filtering process (col. 25 lines 22-48).

In referring to claim 4, Nair show the act of determining that the destination is not local to the node (col. 23 lines 55- col. 24 lines 10).

In referring to claim 5, Nair show the act of determining that the destination is on the local node and not allowing the packet to cross the bridge to another network therefore transmitting to the local user (col. 23 lines 18-54).

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In referring to claims 6-8 and 19, Huang shows comparing address with a list of address that identify communication device that has previously been registered, and determining that is not included and adding the address to the list (col. 4 lines 38-50).

In referring to claim 9, Huang shows the act of communication device (31n) generating the outgoing packet (col. 4 lines 1-10).

In referring to claim 10, Nair shows the user writing packet to receive buffer, which is a separate buffer for communication device used by bridge, and Nair shows second transmitting buffer (col. 25 lines 23-48).

In referring to claim 11, Huang show the packet being transmitted for the first time to communicate over the network by registering with a packet and the act of adding the address to the entry table on order to be registered (col. 4 lines 38-45).

In referring to claim 12, Nair show remote communication device having modem driver installed and the act of using the modem for first time registration using a packet (col. 4 lines 59- col. 5 line 5).

In referring to claim 13 and 22, Dai shows the receiving a packet having destination address, recognizing whether the address is in the entry table, and transmitting packet upon recognition (col. 4 lines 16-35).

In referring to claim 14, Nair show the act of receiving packet at modem and transmitting packet to modem driver (col. 19 lines 51-63).

In referring to claim 17, Nair shows modem hosted by processing device (main controller) internal to the system (fig. 2; col. 5 lines 40-52).

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In referring to claim 18, Nair shows the modem external to main controller (fig. 2; col. 5 lines 40-52).

In referring to claim 23 and 24, Dai shows the destination does not match any address in the list of address and the incoming data packet is filtered or further processing is discontinued (col. 6 lines 7-36).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Choudhary whose telephone number is (703) 305-5268. The examiner can normally be reached on 9am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC
April 2, 2004


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